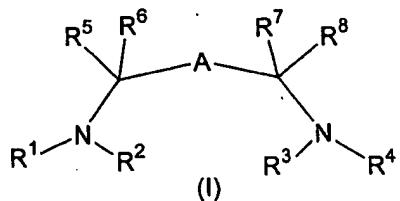


**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application

**Listing of Claims:**

1. (Currently Amended) A chiral catalyst comprising the reaction product of a ruthenium compound, a chiral bis(phosphine) selected from P-Phos, tol-P-Phos or xyl-P-Phos and a chiral diamine of formula (I)



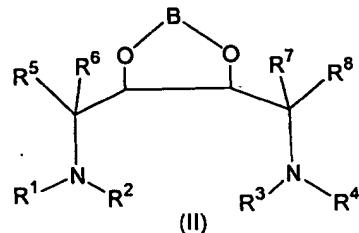
in which R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> or R<sup>4</sup> are independently hydrogen, a saturated or unsaturated alkyl, or cycloalkyl group, an aryl group, a urethane or sulphonyl group and R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> or R<sup>8</sup> are independently hydrogen, a saturated or unsaturated alkyl or cycloalkyl group, or an aryl group, at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> or R<sup>4</sup> is hydrogen and A is a linking group comprising one or two substituted or unsubstituted carbon atoms.

2. (Canceled)
3. (Currently Amended) A catalyst according to claim 1-~~or claim 2~~ wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are the same or different and are selected from hydrogen, methyl, ethyl, isopropyl, cyclohexyl, phenyl or 4-methylphenyl groups.
4. (Currently Amended) A catalyst according to claim 1-~~or claim 2~~ wherein R<sup>1</sup> and R<sup>2</sup> are linked or R<sup>3</sup> and R<sup>4</sup> are linked so as to form a 4 to 7-membered ring structure incorporating the nitrogen atom.
5. (Currently Amended) A catalyst according to ~~any one of claims 1 to 4~~ claim 1 wherein R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are the same or different and are selected from hydrogen, methyl, ethyl, propyl, iso-propyl, butyl, iso-butyl, sec-butyl, tert-butyl, cyclohexyl or substituted or unsubstituted phenyl or naphthyl groups.

6. (Currently Amended) A catalyst according to ~~any one of claims 1 to 4~~ claim 1 wherein one or more of R<sup>5</sup>, R<sup>6</sup> R<sup>7</sup> or R<sup>8</sup> form one or more ring structures with the linking group A.

7. (Currently Amended) A catalyst according to ~~any one of claims 1 to 6~~ claim 1 wherein a substituting group on the carbon atom of linking group A is alkyl (C1-C20), alkoxy (C1-C20) or amino or forms one or more ring structures incorporating one or more carbon atoms making up the linking group.

8. (Currently Amended) A catalyst according to claim 1-~~or claim 2~~ wherein the chiral diamine is of formula (II)

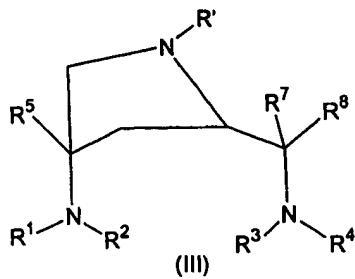


wherein B is a linking group comprising one or two substituted or unsubstituted carbon atoms.

9. (Original) A catalyst according to claim 8 wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> are hydrogen, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are hydrogen or alkyl groups and B comprises C(CH<sub>3</sub>)<sub>2</sub> or (CH<sub>3</sub>)(OCH<sub>3</sub>)C-C(CH<sub>3</sub>)(OCH<sub>3</sub>).

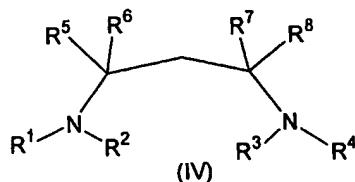
10. (Currently Amended) A catalyst according to claim 8-~~or claim 9~~ wherein the chiral diamine is selected from 3-Aminomethyl-5-6-dimethoxy-5-6-Dimethyl[1,4]-dioxan-2-yi]-methylamine (DioBD) or 2,3-O-isopropylidenebutane 1,4 diamine (DAMTAR).

11. (Currently Amended) A catalyst according to claim 1-~~or claim 2~~ wherein the chiral diamine is of formula (III)

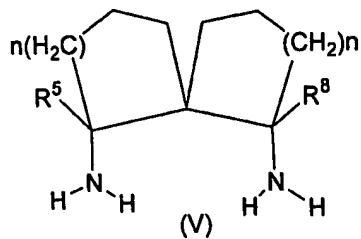


wherein R' is a protecting group.

12. (Original) A catalyst according to claim 11 wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>5</sup> are hydrogen, R<sup>3</sup> and R<sup>4</sup> are hydrogen or alkyl, R<sup>7</sup> and R<sup>8</sup> are hydrogen, alkyl or aryl and R' is selected from an alkyl, aryl, carboxylate, amido or sulphonate protecting group.
13. (Currently Amended) A catalyst according to claim 11-~~or claim 12~~ wherein the chiral diamine is 4-Amino-2-aminomethylpyrrolidine-1-carboxylic acid tent-butyl ester (PyrBD).
14. (Currently Amended) A catalyst according to claim 1-~~or claim 2~~ wherein the chiral diamine is of formula (IV)

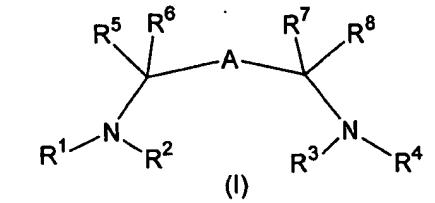


15. (Original) A catalyst according to claim 14 wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>6</sup>, R<sup>7</sup> are hydrogen and R<sup>5</sup> and R<sup>8</sup> are aryl or substituted aryl groups.
16. (Original) A catalyst according to claim 14-~~or claim 15~~ wherein the chiral diamine is Diphenyl-1,3-propanediamine (Dppn).
17. (Currently Amended) A catalyst according to claim 1-~~or claim 2~~ wherein the chiral diamine is of formula (V).



wherein  $n = 1$  or  $2$ .

18. (Original) A catalyst according to claim 17 wherein  $R^5$  and  $R^8$  are hydrogen.
19. (Currently Amended) ~~The use of catalysts of claims 1 to 18-A method for the asymmetric hydrogenation of ketones and imines comprising contacting a ketone or imine with a strong base and a chiral catalyst comprising the reaction product of a ruthenium compound, a chiral bis(phosphine) selected from P-Phos, tol-P-Phos or xyl-P-Phos and a chiral diamine of formula (I)~~



in which  $R^1$ ,  $R^2$ ,  $R^3$  or  $R^4$  are independently hydrogen, a saturated or unsaturated alkyl, or cycloalkyl group, an aryl group, a urethane or sulphonyl group and  $R^5$ ,  $R^6$ ,  $R^7$  or  $R^8$  are independently hydrogen, a saturated or unsaturated alkyl or cycloalkyl group, or an aryl group, at least one of  $R^1$ ,  $R^2$ ,  $R^3$  or  $R^4$  is hydrogen and A is a linking group comprising one or two substituted or unsubstituted carbon atoms..

20. (Original) ~~The use of catalysts method according to claim 19-for the hydrogenation of, wherein the ketone is an alkyl-ketones ketone of formula RCOR' in which R and R' are substituted or unsubstituted, saturated or unsaturated C1-C20 alkyl or cycloalkyl which may be linked and form part of a ring structure.~~